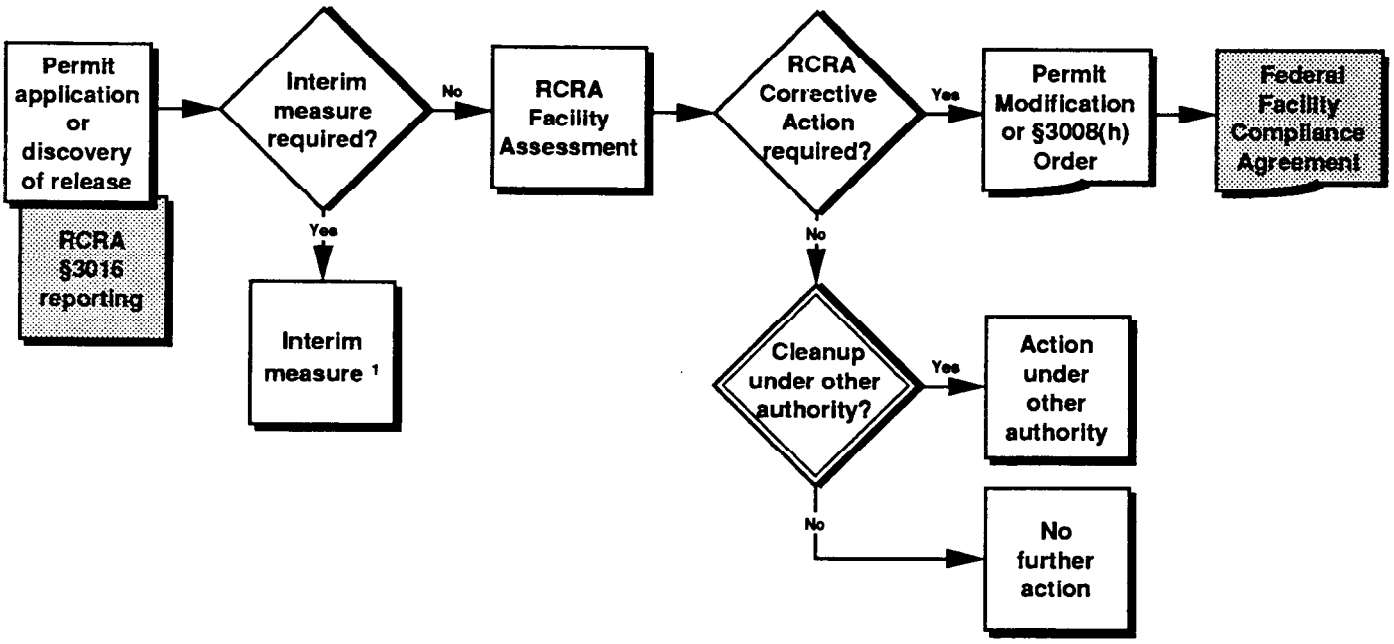
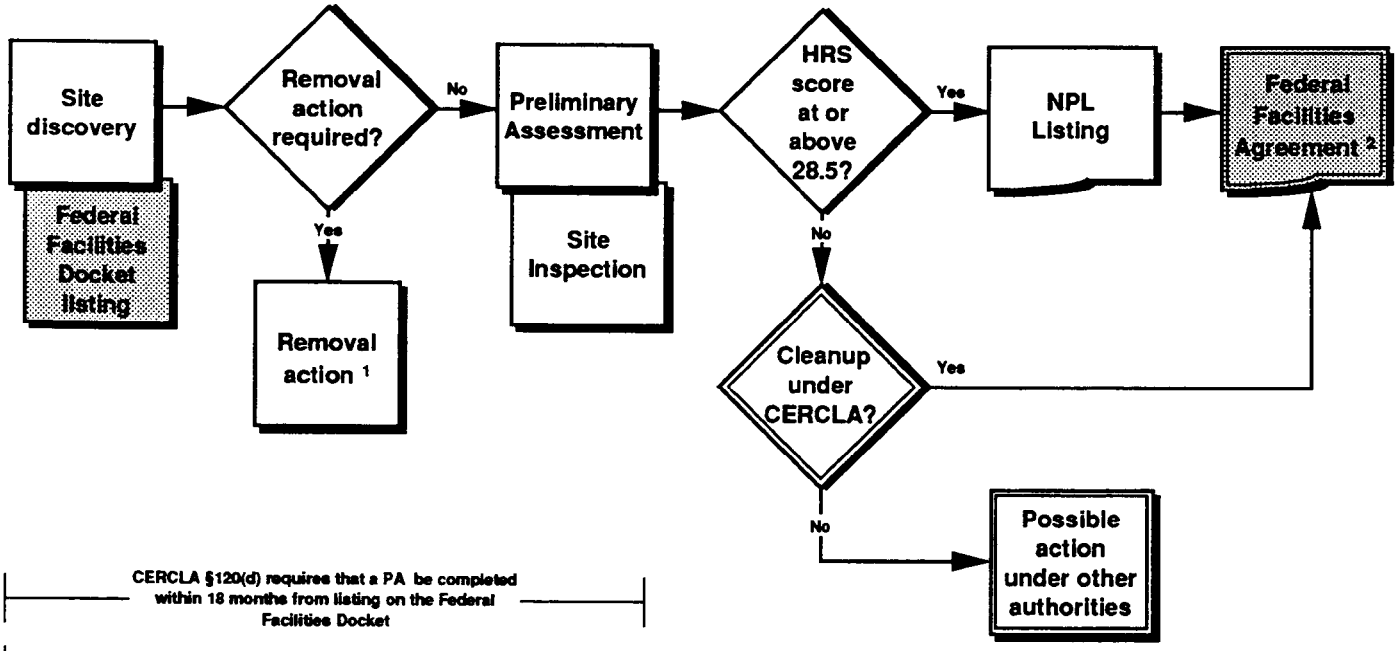
Chapter 2
Facility/Site Assessment

Figure 2-1

Facility Assessment Under RCRA Corrective Action



Site Assessment Under CERCLA Remedial Action



CERCLA §120(d) requires that a PA be completed within 18 months from listing on the Federal Facilities Docket

CERCLA §120(d) requires final NPL listing decision within 30 months of Docket listing

CERCLA §120(e)(2) requires an IAG (or FFA) be signed within 6 months of completing the RI/FS. DOE enters into an FFA after the NPL listing or when a decision is made to conduct the remediation consistent with CERCLA and the NCP

Footnote 1: A removal action or interim measure can be conducted at any time during the process.

Footnote 2: DOE enters into an FFA after the NPL listing and/or in accordance with DOE Order 5400.4.

Note: Shaded items and time lines are specific requirements for Federal facilities.

Note: Items with double-lined boxes are specific requirements for DOE facilities.

Chapter 2
Facility/Site Assessment

I. Introduction

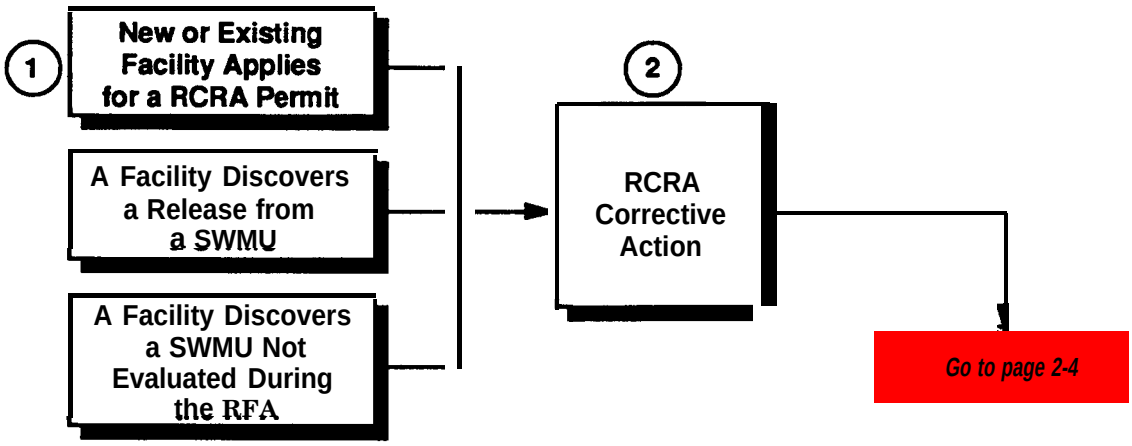
The first phase of conducting RCRA Corrective Action or CERCLA response is to eliminate from consideration under either program those sites or facilities where releases of hazardous substances, hazardous waste, or hazardous waste constituents have either not occurred or present no, or insufficient, risk to human health and the environment to require further action. While there are some significant differences between the site assessment process under RCRA and CERCLA, the basic goal under RCRA and CERCLA is the same–to provide enough information to decide if a very detailed and costly investigation is warranted.

This chapter discusses the following:

- **The applicability of RCRA Corrective Action and CERCLA response authorities;**
- **Reporting and other requirements applicable only to Federal agencies;**
- **Determining the need for interim measures or removal actions to mitigate immediate threats to human health and the environment;**
- **The process for conducting the initial site assessment under both the RCRA Corrective Action and CERCLA remedial programs;**
- **Determining the need for additional investigations and/or cleanup under both RCRA and CERCLA: arid**
- **Developing inter-Agency Agreements (IAGs} betwenn DOE and EPA to conduct a RCRA Facility Investigation end Corrective Measures Study (RFI/CMS) or to conduct a CERCLA remedial investigation/feasibility study (RI/FS).**

Figure 2-1 on the preceding page is a graphic representation of the portion of the two programs discussed in this chapter.

APPLICABILITY OF RCRA



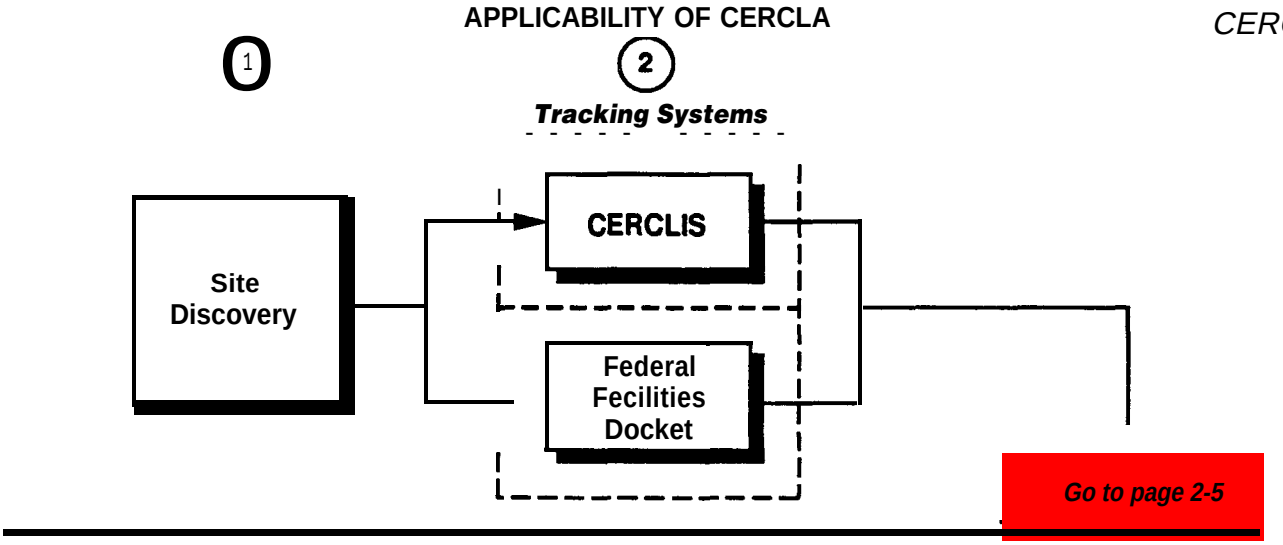
II. Applicability of RCRA Corrective Action

1. **When RCRA Corrective Action Applies.** Hazardous waste treatment, storage, or disposal facilities (TSDFs) are required to have either a RCRA permit or interim status. A RCRA permit consists of two parts: a Part A application providing general information about the facility and a Part B application, which is a detailed discussion on how the facility intends to comply with the applicable regulations. Interim status is the period during which a TSDF, which was in existence as of November 19, 1980 (or which was subsequently regulated under RCRA due to new regulations being issued) may continue to operate without having an approved RCRA Part B permit, provided that the facility has subsequently submitted a Part A permit application. Under proposed 40 CFR §264.500, RCRA Corrective Action typically applies in these cases:

An existing or planned facility applies for a RCRA permit. In these cases, corrective action will begin with a RCRA Facility Assessment (RFA). Both new end interim status facilities seeking RCRA permits are subject to RCRA Corrective Action as pert of the permitting process and as a condition of the final permit or

- **A facility that has a RCRA permit or that is already conducting corrective action (1) discovers en actual or potential release of hazardous wastes or hazardous constituents from a solid waste management unit (SWMU) at the facility or (2) discovers an SWMU that was not examined during the initial RFA at the facility.**

2. **RCRA Corrective Action.** Both new and interim status facilities seeking RCRA permits undergo an RFA to determine if there are actual or potential releases of hazardous waste or hazardous waste constituents from SWMUs already in existence at the facility. RCRA §3004(u) and (v) provide EPA with the authority to require that the facility investigate and address existing or potential releases of hazardous wastes or hazardous waste constituents at the facility as a condition of the facility's permit. Typically, a RCRA permit contains provisions requiring a facility to conduct RCRA Corrective Action if the facility (1) discovers a release of hazardous waste or hazardous waste constituents or (2) discovers an SWMU not evaluated during the permitting process. Under RCRA §3008(h), interim status facilities are subject to RCRA Corrective Action if there is an actual or potential release of hazardous wastes or hazardous waste constituents from SWMUs at the facility.



III. Applicability of CERCLA

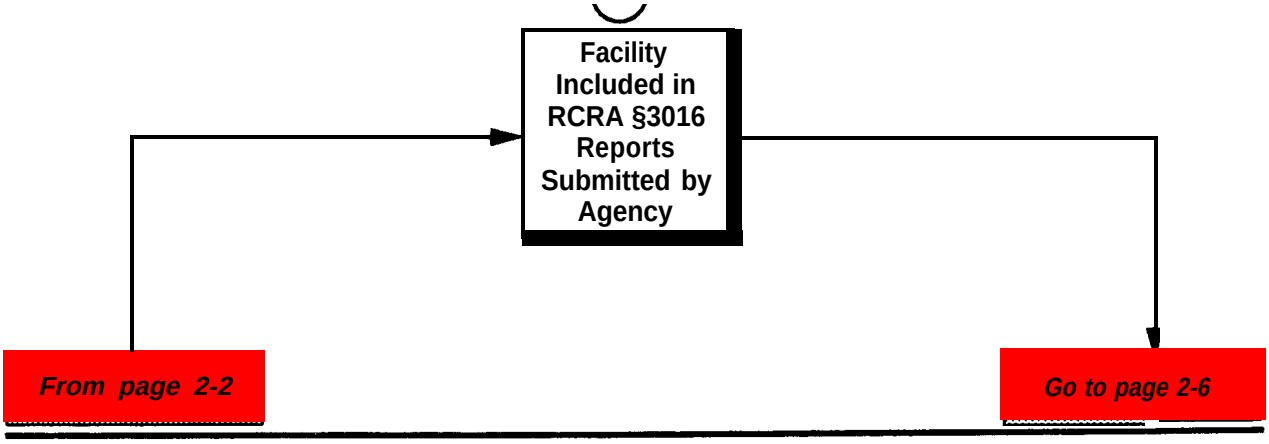
1. **Site Discovery.** CERCLA site assessment begins with site discovery or notification to EPA of the presence of a possible hazardous waste site or the possible release of a hazardous substance. Sites are discovered in several ways:

Self-reporting by the facility (as required by CERCLA §103[al for releasas that exceed a reportable quantity end §103(c) for the existence of a hazardous waste facility):

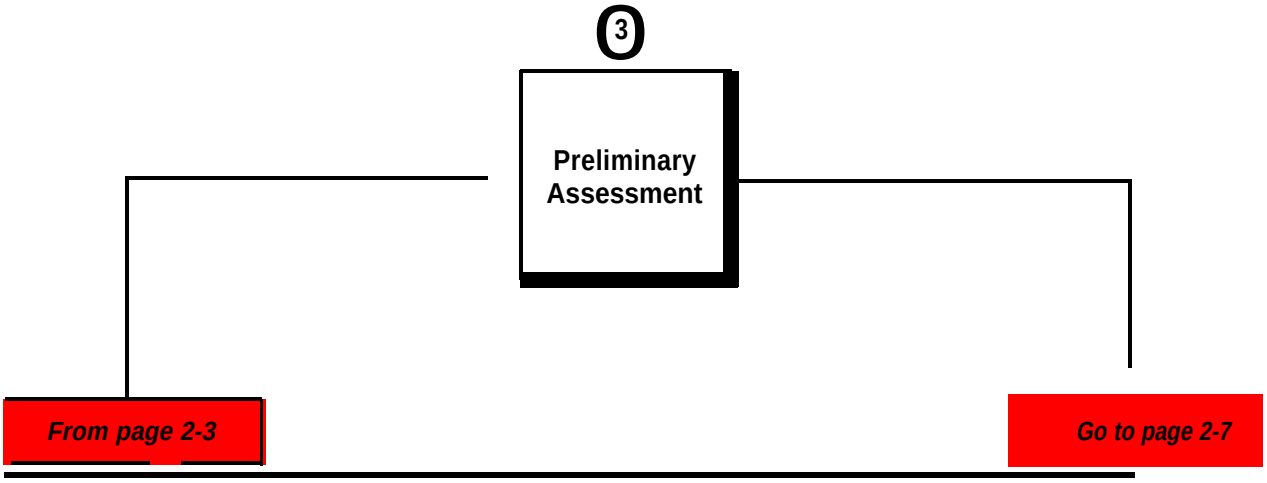
- **Active discovery programs. conducted by EPA, other Federal agencies, or States, that are designed to identify contaminated sites in a particular geographic area or industrial sector;**
- **Citizen complaint. made either informally or formally through submission of a petition to conduct a preliminary assessment, as provided under CERCLA §105(d); or**
- **Incidental discovery by EPA. other Federal agencies, or States (40 CFR §300.405).**

2. **Tracking Systems.** Once discovered, sites are entered in the CERCLA Information System (CERCLIS), EPA's computerized inventory and tracking system for sites with potential releases requiring a CERCLA response. CERCLIS maintains a permanent record of all response milestones at each site, including site investigations and cleanup activities. As of August 1993, more than 35,000 sites are listed in CERCLIS. The RCRA Corrective Action program does not utilize a tracking system such as CERCLIS.

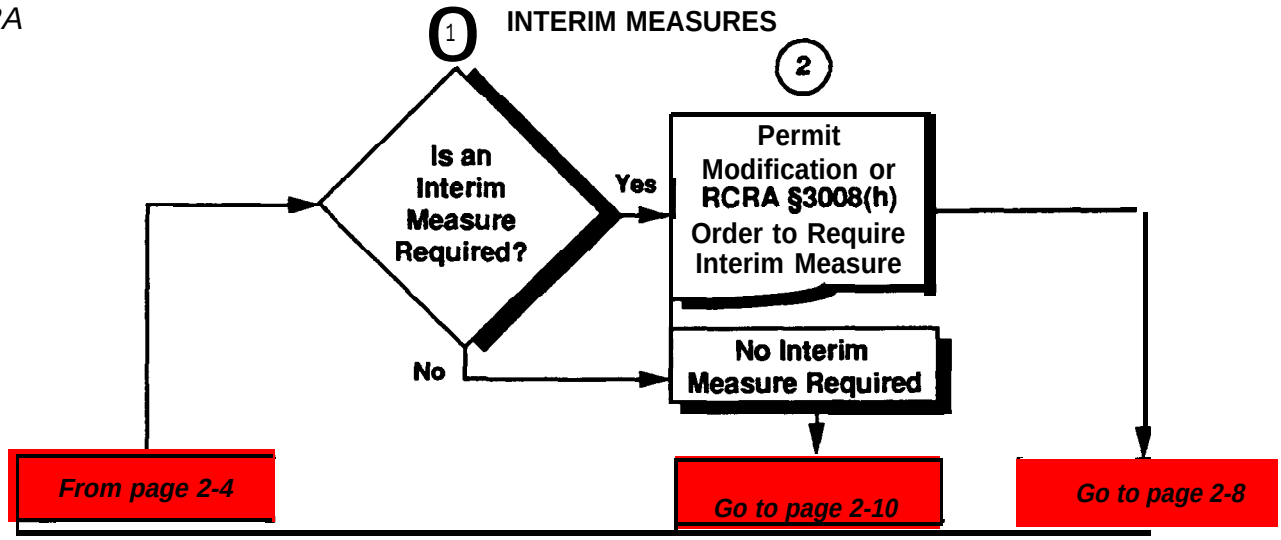
As required by CERCLA § 120(c), Federal facility sites are also entered on a second, separate list–the Federal Agency Hazardous Waste Compliance Docket. Any Federal site where hazardous wastes have been stored, treated, or disposed of, including sites where such action occurred in accordance with a RCRA permit, are listed in this Docket. The Federal Facilities Docket, as it is known, provides specific accountability for EPA and responsible Federal agencies in meeting the reporting requirements and schedules for Federal facility response as required by CERCLA § 120. (As of August 1993, more than 1,200 sites are listed on this Docket.)



3. **RCRA §3016 Reporting.** Under RCRA §3016, all Federal agencies are required to submit to EPA a biennial report on all facilities owned or operated by the agency, where hazardous wastes have been treated, stored, or disposed of at any time. These reports are often referred to as "3016 reports. " Under CERCLA §120, sites reported under RCRA §3016 are listed on the Federal Agency Hazardous Waste Compliance Docket. if the facility was listed on the first Docket, CERCLA § 120(d) requires that a preliminary assessment (PA) be conducted within 18 months of October 18, 1986. Current DOE and EPA policy for sites listed on the fourth Docket update (September 27, 1991) is that a PA, and, if warranted, a site inspection (SI), must be completed within 18 months of September 27, 1991 (55 FR 49328).



3. **Preliminary Assessment.** A PA is conducted for each site in CERCLIS (40 CFR §300.420). A PA is a "desktop" review of available information about the site. This includes demographic and physical information. DOE is responsible for conducting PAs at its own facilities and submitting the results to EPA. CERCLA § 120(d) requires that a PA for each site listed on the first Docket be conducted within 18 months of October 18, 1986. Current EPA policy is that for sites listed on a given Docket update, a PA, and, if warranted, an SI, must be completed within 18 months of publication of that Docket update in the *Federal Register.* PAs will be discussed in detail in Section Vll of this chapter.

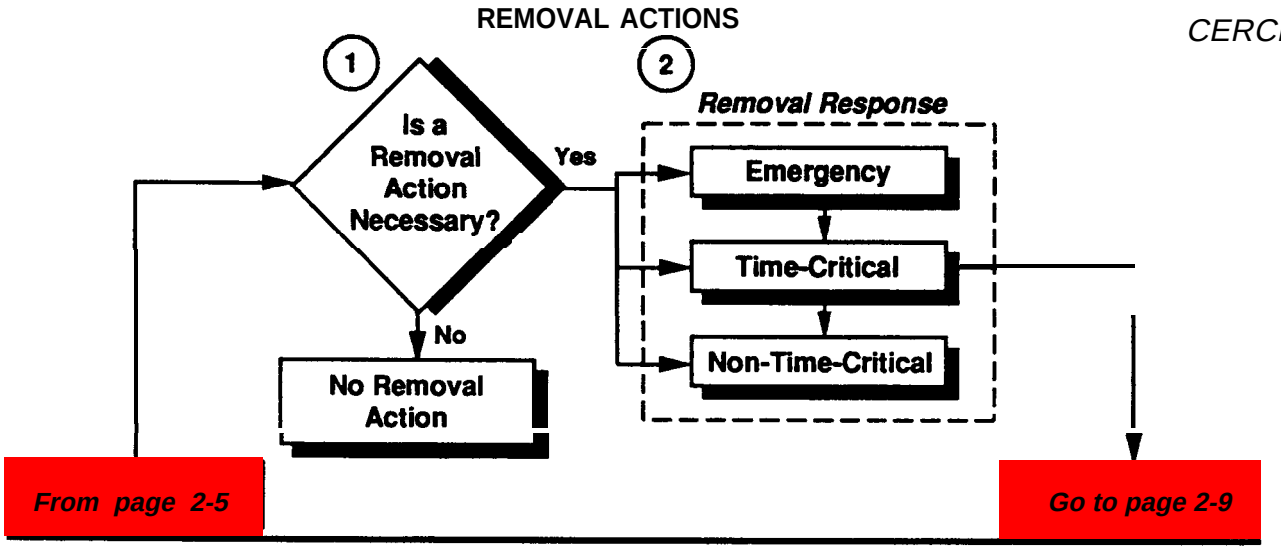


IV. RCRA Interim Measures

1. **Interim Measures.** Interim measures are short-term actions taken to mitigate actual threats, or to prevent realization of imminent threats, posed by a release of hazardous waste or hazardous waste constituents from an SWMU. These measures are described in the proposed Subpart S rule at 40 CFR §264.540. They are usually conducted as part of the development of a long-term comprehensive cleanup strategy for the facility. Interim measures under RCRA Corrective Action are similar to removal actions under CERCLA. The most significant difference is in the mechanisms used to require that a facility conduct an interim measure. The need for, and the time available to plan, an interim measure relates to the nature, immediacy, and magnitude of the threat posed to human health and the environment. Under proposed 40 CFR §264.540(b), typical evaluation factors for determining the need for an interim measure include, but are not limited to, the following:

- **The time to develop end implement a RCRA corrective measure;**
- **Actual or potential exposure of nearby populations, drinking water supplies. or sensitive ecosystems;**
- **The potential for further environmental degradation:**
- **The potential for a release or migration of a release of hazardous wastes or hazardous waste constituents; or**
- **The risk of fire, explosion, or failure of containment systems.**

2. **Permit Modification or Order to Conduct en Interim Measure.** Once the nature. immediacy, and magnitude of the threat are determined, EPA will modify the facility permit or issue a RCRA §3008(h) Order to require an interim measure. In some emergency situations, such as a serious fire or explosion threat, EPA may require that immediate action be taken before actual issuance of the permit modification or RCRA §3008(h) Order. Such action may be taken under the authority of RCRA §7003. The process that EPA will follow when ordering a facility to conduct an interim measure is described at proposed 40 CFR *§264.540(a).*



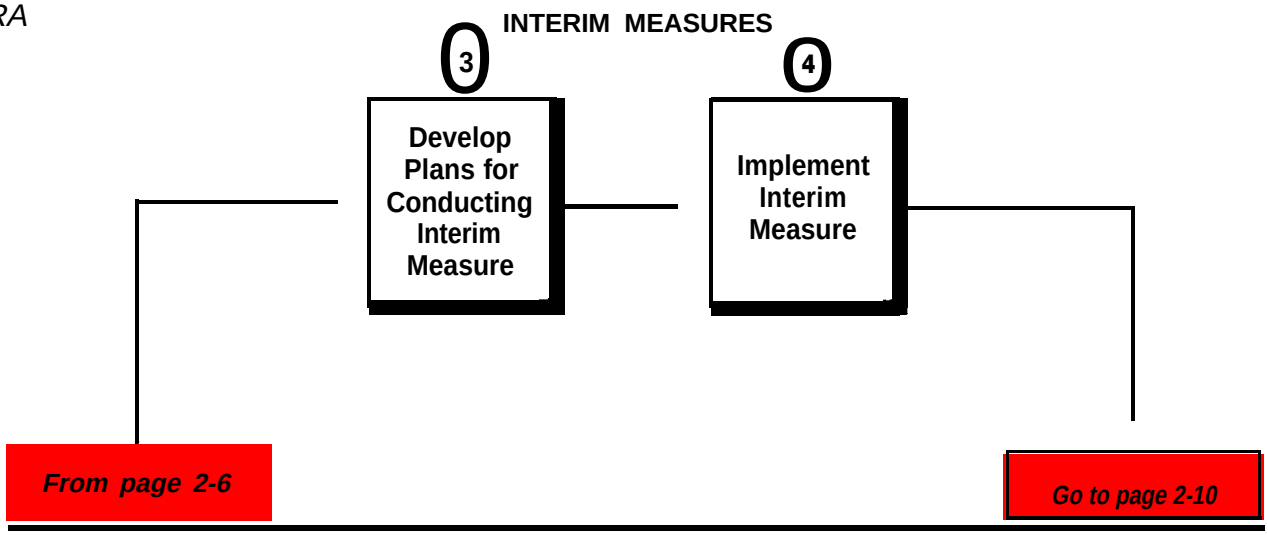
V. CERCLA Removal Actions

1. **Removal Site Evaluation.** At any time in the remediation process (even before a remedial PA is conducted), DOE may perform a removal site evaluation, as described under 40 CFR §300.41O, to determine whether emergency action is necessary to reduce any threat posed by an actual or potential release of a hazardous substance. The evaluation may be based on information developed during a previous investigation (e.g., PA or SI), or may entail its own investigation in the form of a removal PA and, if necessary, a removal SI.

   Removals are relatively short-term actions, as compared to the long-term remedial solutions, and are an integral part of Superfund Accelerated Cleanup Model (SACM). Conditions that might call for a removal action include the following:

- **Actual or potential exposure of nearby human or animal populations or sensitive ecosystems (40 CFR §300.415 (b)(2)(i);**
- **The potential for contamination of drinking water supplies or the food chain (40 CFR §300.415(b)(2)(ii);**
- **The potential for further environmental degradation (40 CFR §300.415(b)(2)(viii):**
- **The potential for a release or migration of a release of hazardous substances, pollutants, or contaminants (40 CFR §300.415(b)(2)(iv)); or**
- **The risk of fire. explosion. or failure of containment systems (40 CFR §300.415(b)(2)(vi)).**

2. **Removal Response.** The requirements for removals are established under 40 CFR §300.415. According to the 1988 EPA guidance, removals fall into three categories: (1) emergencies that require immediate response (i.e., within hours or days), (2) ***time-critical*** removals where response must be rapid, within 6 months, but need not be immediate, or (3) ***non-time-critical*** removals where response may be delayed more than 6 months. Under 40 CFR §300.415(m)(3), if a removal action requires onsite activities longer than 120 days, a community relations plan is required. For non-time-critical removals, 40 CFR **§300.415(m)(4)** requires that an engineering evaluation/cost analysis (EE/CA) be conducted if a planning period of more than 6 months is available before onsite activities commence.

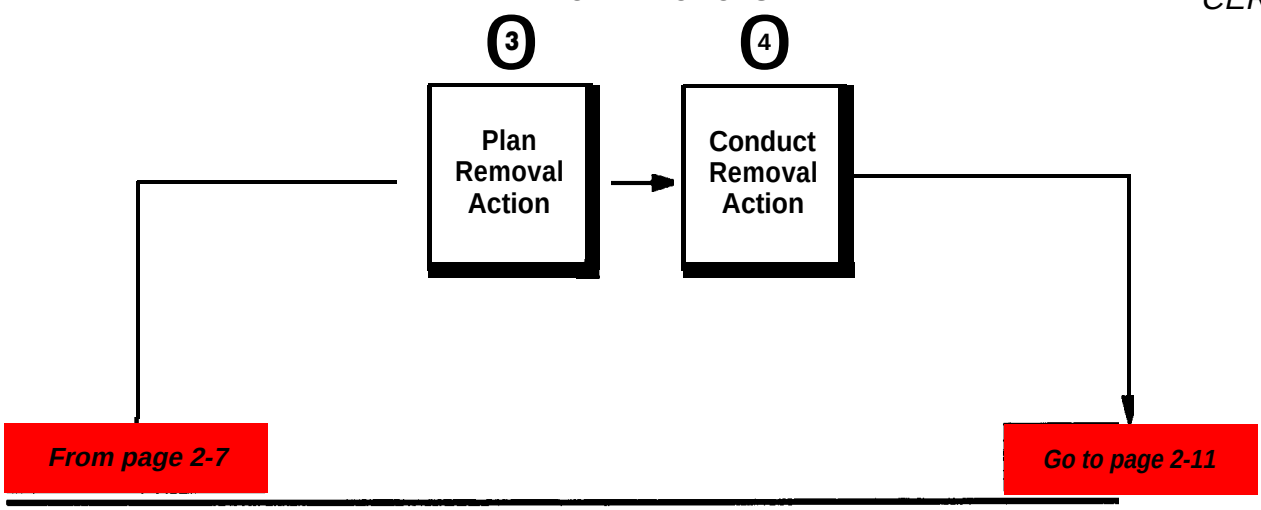


3. **Develop Plans for Conducting Interim Measures.** The facility will develop, and submit for EPA approval, plans for the design, construction, and implementation of the interim measure. Examples of actions considered interim measures include implementing source controls, preventing migration of the release, or installing measures to control exposure to the release. Any interim measure considered should contribute to the final cleanup of the site and should, to the extent possible, not interfere with the ultimate cleanup of the facility. For detailed information on interim measures, see Chapter 2 of the DOE guidance document titled *RCRA Corrective Action Program Guide (Interim Guidance).*

   While the use of interim measures, as described in the proposed Subpart S rule, is designed to permit the implementation of short-term actions to protect human health and the environment, EPA recently began to promote a somewhat parallel concept called "stabilization." The stabilization initiative stems from the RCRA Implementation Study (July 1990), which recommended that EPA adopt, as a program strategy, more frequent use of interim actions to achieve near-term environmental results at facilities with the most serious problems. Although the interim measures and the stabilization initiative appear to be the same concept, interim measures should be viewed as *too/s* to achieve the stabilization *goal.* The "stabilization initiative, " therefore, appears to be the overall programmatic driver for the process of implementing short-term remediation activities and will likely be incorporated into the final corrective action rule language regarding interim measures.

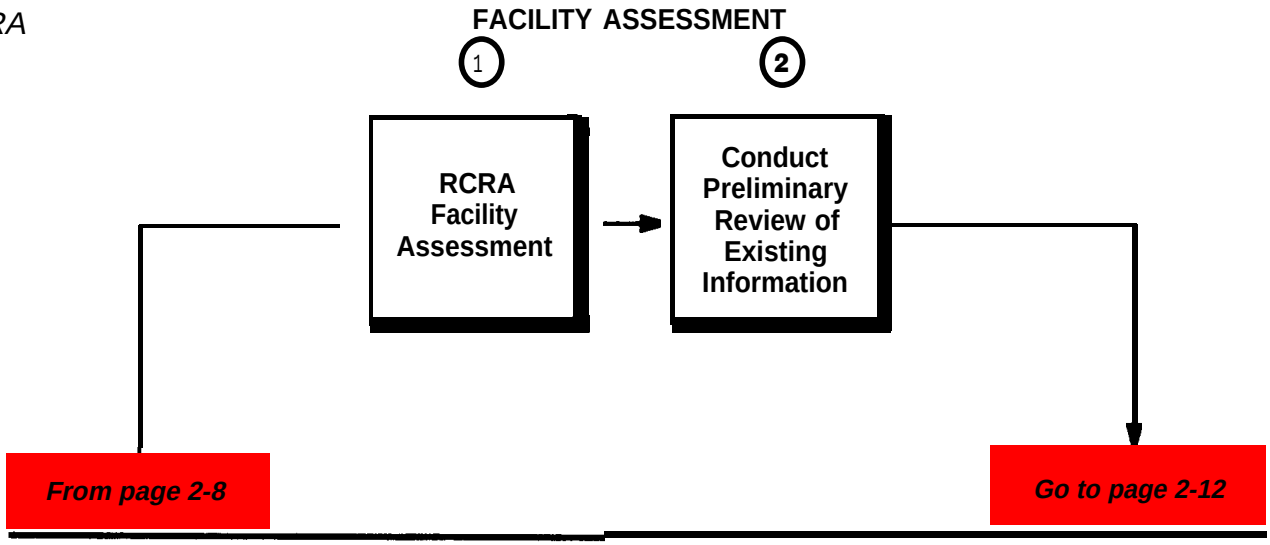
4. **Implement the Interim Measure.** Once these plans are approved, the facility implements the interim measure. The facility may be required to provide periodic progress reports to EPA and will be required to submit a final interim measures report, which describes the release or potential release triggering the need for an interim measure, the actions taken, and the effectiveness of the interim measure in mitigating the threat.

REMOVAL ACTIONS



3. **Plan Removal Action.** The facility should have a plan for implementing a removal activity. Removals are not limited to the physical removal of wastes; other types of removals include implementing source controls, preventing migration of the release, or installing measures to control exposure to the release (e.g., a fence). Any removal action considered should contribute to the final remedial action at the site.

4. **Conduct Removal Action.** Once the removal action is complete, the facility must submit a report on the nature of the threat, the actions taken, and the success in mitigating the threat to the Regional and National Response Teams and to other DOE officials as described in the Federal Facility Agreement or by DOE direction.

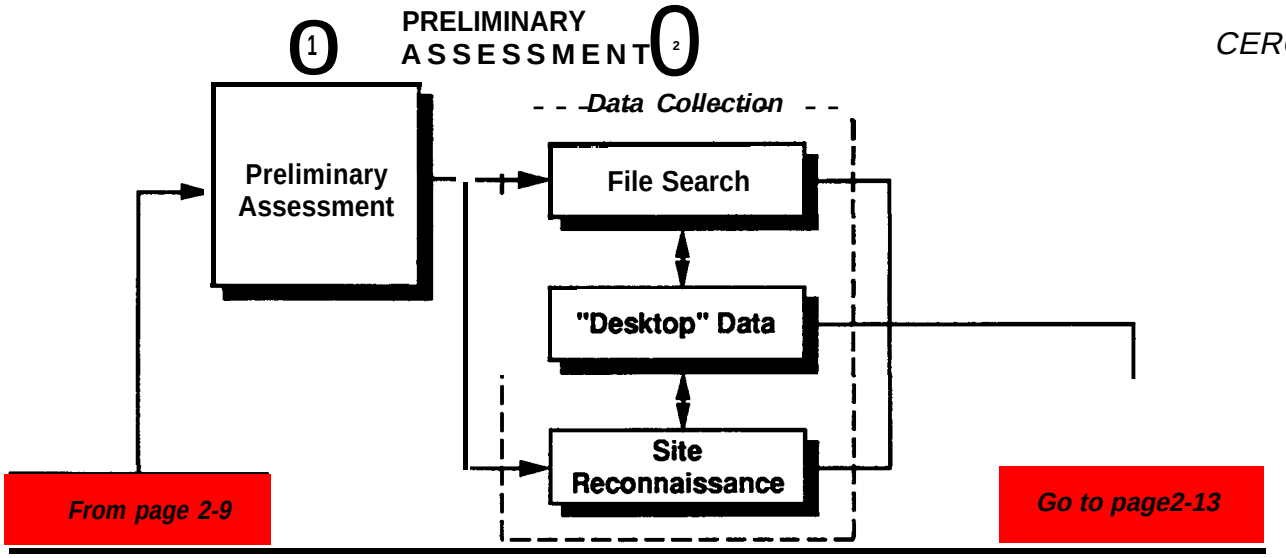


VI. The RCRA Facility Assessment

1. **The RCRA Facility Assessment.** The first phase of the RCRA Corrective Action process is the RFA. The proposed Subpart S rule does not specifically address RFAs; however, EPA has developed a guidance document on RFAs titled *RCRA Facility Assessment Guidance (1986).* EPA usually conducts the RFA; however, some DOE facilities have been authorized to conduct RFAs. The RFA is a screening device, similar to the CERCLA PA/SI process, used to ***determine if there is a release or threat of release of hazardous waste or hazardous waste constituents at a TSDF.*** Information collected during the RFA identifies those SWMUs, environmental media, or parts of a facility requiring further investigation, and eliminates those units that do not require additional investigation.

2. **Tha Preliminary Review.** There are three steps in conducting an RFA. The first is a preliminary review of existing information about the facility. This review involves gathering and evaluating existing information on the facility in order to identify the SWMUs at the facility, and to provide an initial evaluation of the potential for release of hazardous wastes or hazardous waste constituents from those SWMUs. The preliminary review examines the following information:

- **In permit applications submitted to EPA or contained in existing permits for discharges or emissions (the RCRA Part A and Part B applications, National Pollutant Discharge Elimination System [NPDES] or Clean Air Act [CAA] permits, etc.);**
- **On inspections of the facility by the owner/operator, EPA, or others;**
- **In reports of known releases, other investigations, or cleanups at the facility;**
- **About current and past waste generation and handling practices;**
- **Showing the location of known or potential SWMUs;**
- **Assessing the potential for a release to environmental media; and**
- **Describing the environmental setting of the facility.**



VII. CERCLA Preliminary Assessment

1. **The Preliminary Assessment.** If a removal action is not warranted, a PA is conducted. A PA is a limited-scope investigation designed to distinguish between sites posing little or no threat to human health and the environment and sites that do pose a threat and thus warrant further investigation and action under CERCLA or other authorities. A PA may also identify a site requiring a removal action.

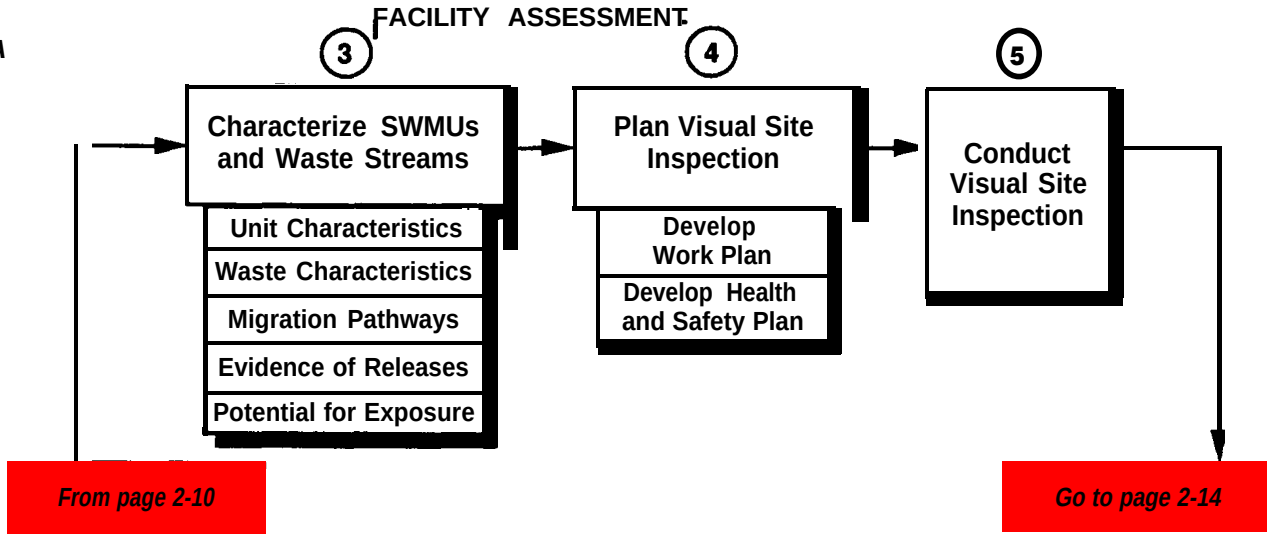
   The PA is defined in 40 CFR §300.420 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). As the first stage of Superfund site assessment, the PA is a ***relatively quick. low-cost compilation of existing information*** about the site and its surroundings, similar to the PR of an RFA under the RCRA Corrective Action program. The PA emphasizes comprehensive information on targets—that is, people and resources that might be threatened by a release of a hazardous substance, pollutant, or contaminant. Environmental media and waste sampling is not required during the PA.

2. **Data Collection.** PA information is typically collected through a combination of file searches, “desktop” data development, and site reconnaissance.

- **Review of the files at tha facility should provide useful information concerning site operations and history, waste types end quantities, waste handling and disposal practices. environmental permitting and possible violations, etc.**

- **A significant portion of the information needed for a PA can be obtained from “desktop” sources such es topography maps, aerial photographs, on-line databases, and published geologic or hydrologic studies.**

- **Reconnaissance is nacessary to fully characterize tha site and its surroundings, and to locate and verify targets. An offsite reconnaissance is generally required; a site reconnaissance may be performed if access is easily obtainable and health end safety considerations do not present obstacles.**

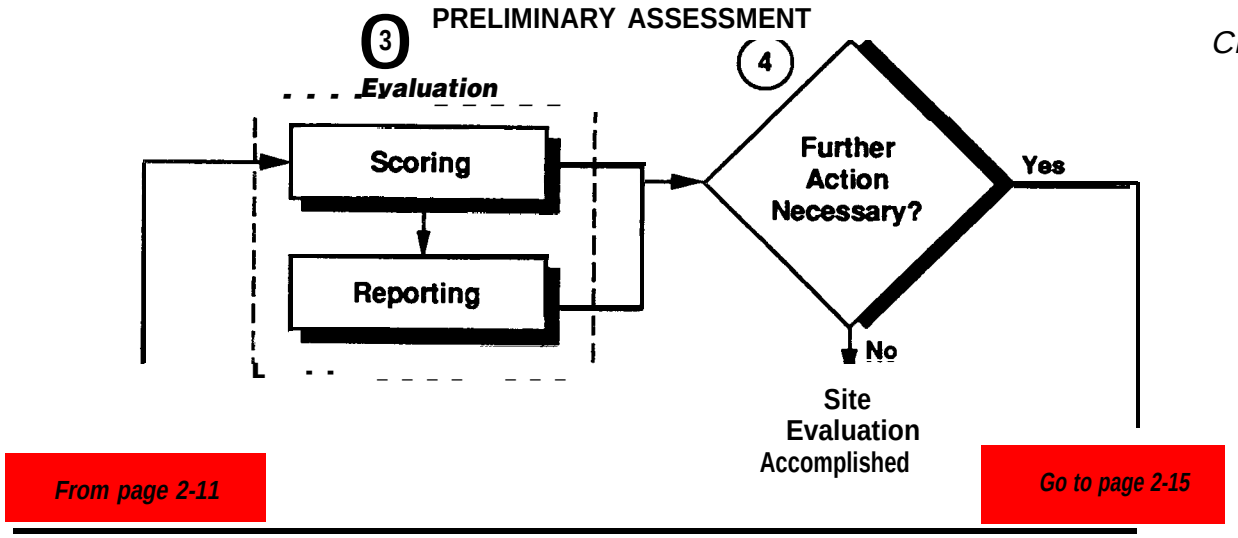


3. **Characterize SWMUs and Waste Streams.** Once the preliminary review is complete, each waste stream and the SWMUs associated with them are characterized according to the following:

- **Unit characteristics such as design, age. materials used in construction, etc.:**
- **Tha characteristics of the waste such as physical state, volume, and known hazardous constituents;**
- **Factors related to potential migration pathways such as depth to groundwater, surface water runoff patterns, vents to air. etc.;**
- **Evidence of releases including groundwater sampling records, reports of releases or spills, etc.; and**
- **Potential for exposure of humans, animals, or sensitive ecosystems to releases of hazardous waste or hazardous waste constituents.**

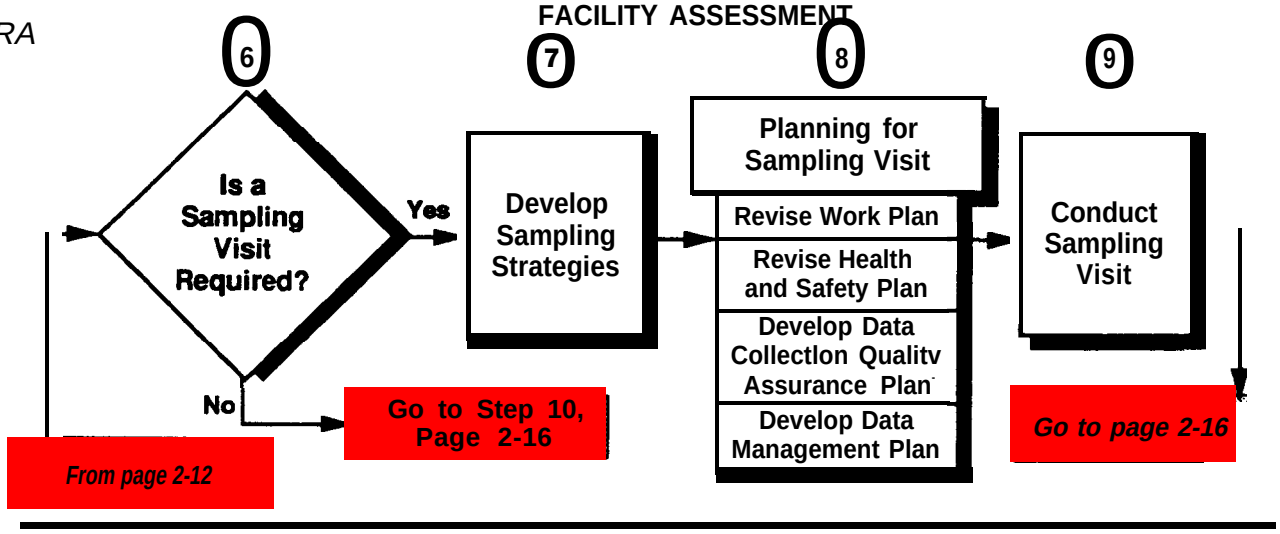
4. **Planning a Visual Site Inspection.** The next step in conducting an RFA is a visual site inspection (VSI). Development of a work plan discussing the activities to be conducted during the VSI is recommended. Further, a health and safety plan (HASP) meeting the requirements of 29 CFR 51910.120 should be developed and implemented to establish safety guidelines and procedures for the onsite activities.

5. **Conducting a Visual Site Inspection.** During the VSI, the list of SWMUs developed during the preliminary review is revised (as necessary); detailed information about the operations at the facility and at each SWMU is collected; and ***each SWMU is examined for visual evidence of releases or potential releases of hazardous waste or hazardous waste constituents.*** Photographs of each unit are taken to document any evidence of releases and are included in the RFA report. Standard practices for field operations such as the use of bound, waterproof field notebooks must be followed during the VSI. The combined data of the preliminary review and VSI may be sufficient to determine the need for interim measures or to determine the need for further investigation of each SWMU.



3. **Evaluation.** The information collected during the PA is analyzed to formulate hypotheses about suspected releases and who or what has been exposed. EPA requires a brief narrative report and a completed "Potential Hazardous Waste Site Preliminary Assessment Form" (EPA Form 2070-12, revised September 1991). In addition to information on the PA form, the site is initially scored using a streamlined application of the Hazard Ranking System (HRS) specifically designed for the data constraints of the PA. Manual scoresheets are available for this purpose ("PA Scoresheets, " EPA Form 2070-1 5), as is a computerized scoring program ("PA-Score Software, Users Manual, and Tutorial, " EPA/540/P-91 /01 O).

4. **Further Action Necessary?** On the basis of the PA score and supporting information, EPA determines whether further investigation is necessary. Sites that score 28.5 or higher are recommended for an SI. Generally, sites that score below 28.5 are designated as "Site Evacuation Accomplished (SEA), meaning that EPA does not require further action under CERCLA. However, DOE (pursuant to DOE Order 5400.4) or State authorities may choose to pursue further action beyond the mandate of CERCLA, or may be required to pursue remedial activities under other authority (e.g., RCRA, TSCA). States, other regulatory authorities, or Federal agencies may undertake further action at their own SEA sites. in the case of sites that do not score above 28.5, and thus are not listed on the NPL, DOE's policy is to remediate such contaminated sites using CERCLA or, when appropriate, other authorities, such as RCRA. A removal assessment may be recommended for any site, regardless of its score. As is the case with the PA, Federal agencies are responsible for conducting SIs at their own facilities and submitting the results to EPA.

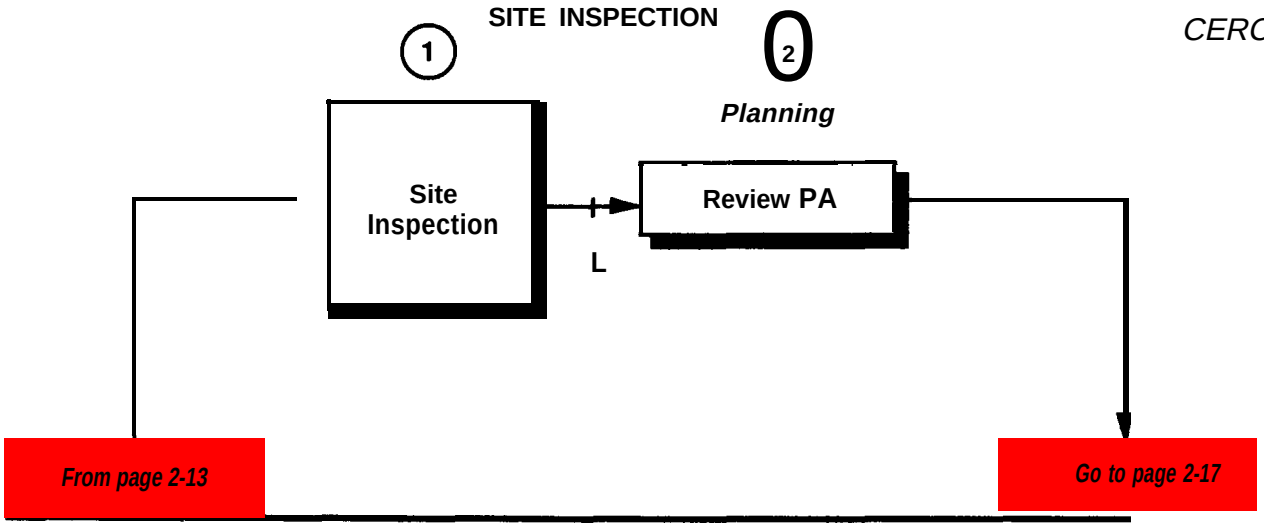


6. **Sampling Visit Required?** Based upon analysis of the data collected during the preliminary review and VSI, it is often possible to determine the need for the sampling of environmental media. If sampling is not required, it is possible to proceed to the development of the RFA report. If sampling is required, the next step in conducting an RFA is to conduct a sampling visit. The VSI and sampling visit have objectives similar to the CERCLA SI process.

7. **Develop Sampling Strategy.** Which media are to be sampled and the location of sampling points are decisions usually based upon the information gathered during the preliminary review and VSI. Analysis of the data from the preliminary review and VSI is used to focus the sampling visit on those SWMUs or areas suspected of being contaminated by releases of hazardous waste or hazardous waste constituents. However, if the data gathered during the preliminary review and VSI are of limited or poor quality, it may be necessary to develop a comprehensive sampling strategy for the facility (see EPA's 1986 RFA Guidance, Chapter 4).

8. **Planning for Sampling.** In either case, the work plan for the VSI should be revised to include discussion of the activities required while conducting the sampling visit. The HASP developed for the VSI may also require revision to reflect the need for personnel safety during sampling. A data collection quality assurance plan (DCQAP) and a data management plan (DMP) should be developed as part of planning the sampling visit. The DCQAP is a document that presents in specific terms the data collection strategy, sampling procedures, sample collection points, sample preservation techniques, field measurements procedures, chain-of-custody requirements, and sample analysis procedures designed to achieve adequate data quality, The DMP is a document that details the procedures and format for tracking and presenting data and results of the sample analyses.

9. **Conduct Sampling.** During the sampling visit, all sampling must be documented using standard practices for field operations. Each sampling event should be photographed, and the location of the sampling points should be noted on a map of the facility. In addition to the sampling activities, the sampling team often can collect information about the operations, SWMUs, and environmental setting of the facility. All sampling and analysis activities conducted during the sampling visit must conform to the procedures set forth in the DCQAP. Any deviation from the DCQAP must be completely documented. All data generated by the analyses must be managed according to the procedures established in the DMP. Development of the RFA report begins following completion of the analysis of the environmental samples collected during the sampling visit.



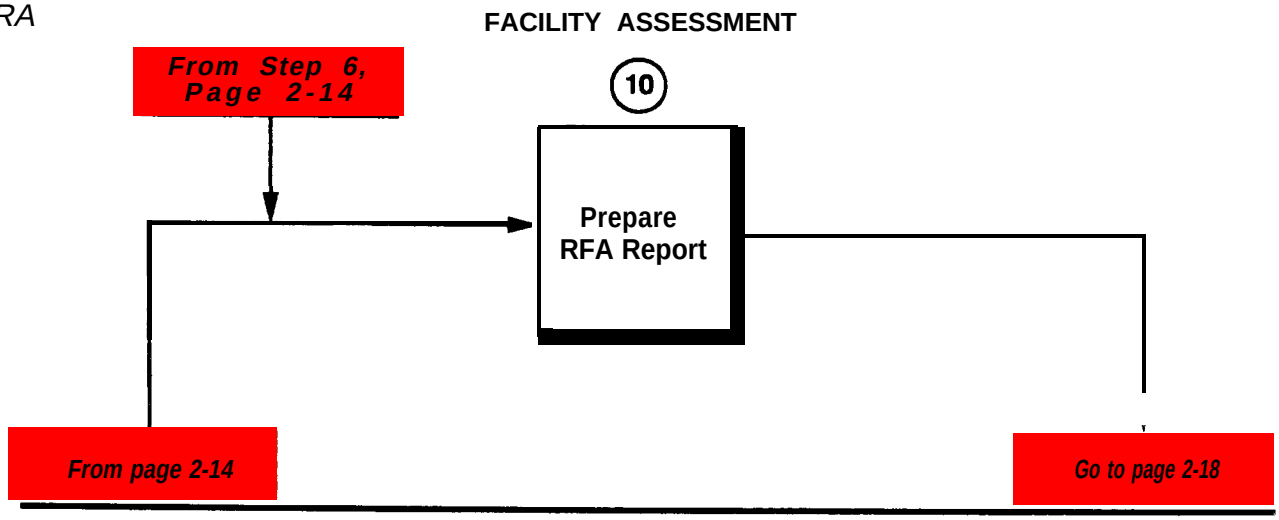
VIII. CERCLA Site Inspection

1. **Site Inspection.** The SI is a more detailed investigation than the PA, with an emphasis on ***collecting and analyzing samples of environmental and waste media.*** The objective is to identify sites that may pose a threat to human health or the environment sufficient to warrant placement on the NPL. The SI also identifies sites that may pose an immediate threat and require a removal action (40 CFR 9300.420 [c]).

   Depending upon site complexity and objectives, the SI may be conducted in one stage or two. This is consistent with the dual nature of the SI, which must fulfill one of two distinct functions that frequently have different purposes:

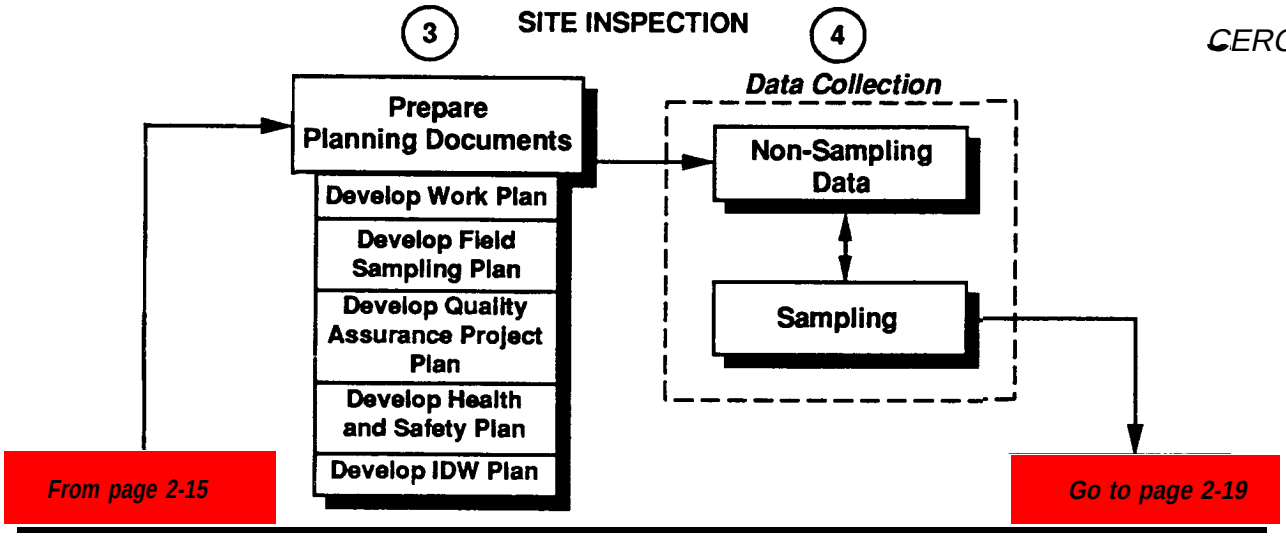
   - **Provide a more refined screen to *eliminate low- and no-threat sites* from further Superfund activity (typically a narrowly focused SI with limited sampling requirements); or**
   - **Provide sufficient date, of sufficient quality, to support a documented HRS score sufficient to *Place high-threat sites on the NPL* (typically e more sophisticated investigation with greeter sampling requirements end, potentially, special field activities).**

2. **Planning.** SI planning begins with a review of the PA findings and all information collected regarding hazardous substance releases and target exposures. If the site is clearly an NPL candidate (i.e., HRS score equal to or greater than 28.5), a *single SI* designed to provide full HRS documentation may be conducted. More often, a two-stage approach is appropriate. A *focused S/first* tests the PA findings that resulted in the SI recommendation. If the findings are not supported by sampling results, the site may be designated as SEA. If the PA findings are supportable, an *expandad SI* is conducted to fully document site conditions for an HRS evaluation. For additional information on CERCLA SIs, refer to the DOE Office of Environmental Guidance Information Brief *Site /inspections (S/s) Under CERCLA (EH-231-*013/0693, June, 1993).



10. Preparing the RFA Report. Upon completion of the preliminary review, VSI, and sampling visit, the RFA report is developed and submitted to EPA for review. According to EPA's RFA guidance, the RFA report discusses the following.

- **The purpose and scope of the RFA;**
- **A brief discussion of the history of the facility;**
- **A list of the SWMUs identified at the facility;**
- **A list of the types of waste managed at the facility;**
- **The environmental setting of the facility;**
- **A detailed description of each SWMU, the waste managed in the SWMU, end the potential for release of hazardous waste or hazardous waste constituents from that SWMU:**
- **A list of all suspected or confirmed releases at the facility; and**
- **Recommendations for further actions at the facility.**

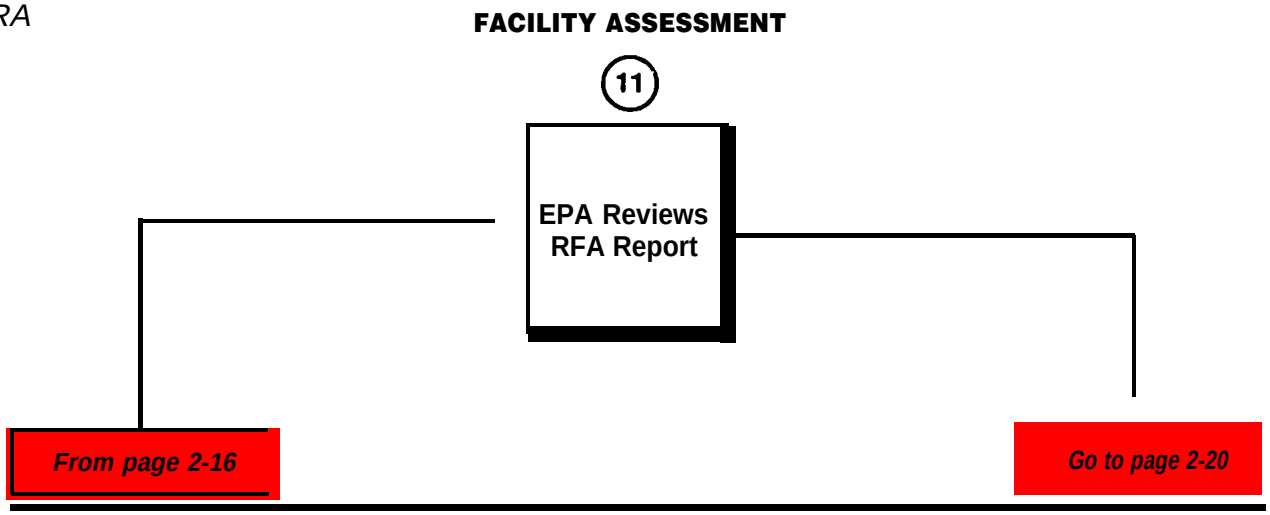


3. **Prepare Planning Documents.** Planning documents are prepared either separately or as elements of a single document, to guide the SI. These include:

- **A work plan that specifies personnel, administrative. and logistical requirements;**
- **A field sampling plan (FSP) that identifies the location, type, rationale, and analysis of each sample;**
- **A quality assurance project plan (QAPP] that details sample collection. handling, and analysis protocols;**
- **A health and safety plan (HASP) detailing procedures to protect the workers performing the SI; end**
- **An investigation-derived waste (IDW) management plan for handling weste materiels (e.g.. soil cuttings, decontamination fluids) produced during the SI.**

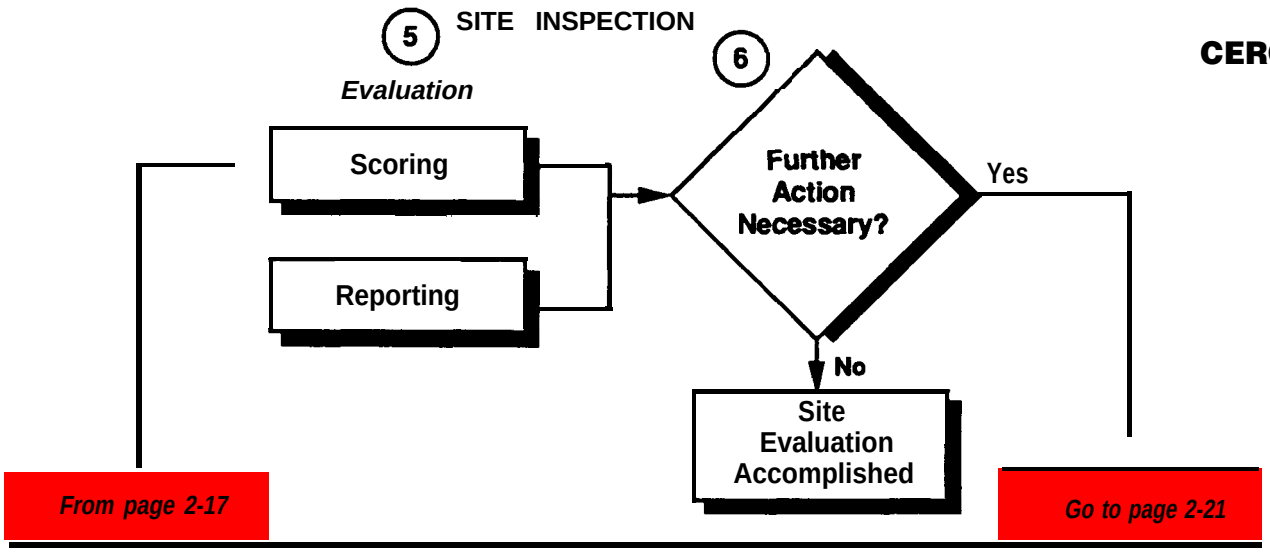
4. **Data Collection.** The amount of non-sampling data that needs to be collected depends primarily on the type of SI selected. A *focused SI* centers on testing PA hypotheses through sampling; it does not usually require much non-sampling data beyond what were collected during the PA. If the PA findings are supported and an *expandad SI is* conducted, sampling as well as non-sampling data requirements for a full HRS evaluation must be collected and rigorously quality-assured.

Sampling requirements and strategies also vary according to the type of SI. Focused SI sampling, designed to test PA findings, is usually limited to a relatively small number of samples. The emphasis is on waste media and target sampling in order to identify hazardous substances associated with the site and indicate whether targets are contaminated. Both the expanded SI and the single SI are designed to document releases of hazardous substances to HRS standards of certainty; therefore, sampling is intensive and subjected to rigorous quality assurance/quality control (QA/QC).



11. EPA Review. EPA will review the RFA report and assess the need for additional investigations. The factors considered in determining the need for additional investigations include the following:

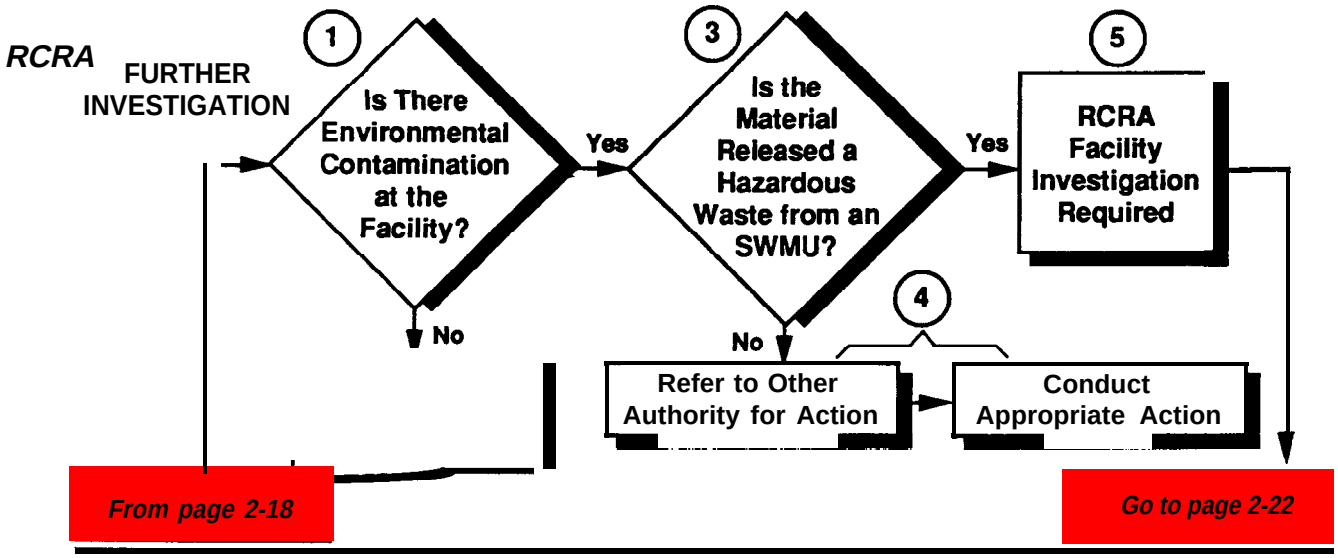
- **The presence or absence of, the age of, the integrity of, and the materials used to construct any engineered features intended to prevent releases of hazardous waste or hazardous waste constituents to surface water, groundwater. air, or soil;**
- **The potential for generation of subsurface gases {especially methane from the decomposition of organic compounds);**
- **Direct or indirect evidence of releases of hazardous wastes or hazardous waste constituents; and**
- **Whether any actual or potential release discovered during tha RFA is subject to RCRA Corrective Action or whether another regulatory program has authority over that release.**



5. **Evaluation.** When sufficient information has been gathered, the site is scored according to the HRS (Appendix A of the NCP). EPA developed the HRS to assess the relative risk posed by a site. The HRS evaluates the relative threat posed through four exposure pathways: (1) groundwater, (2) surface water, (3) soil, and (4) air. Each pathway requires an evaluation of (1) the likelihood that a hazardous substance has been or could be released from the site; (2) the quantities and specific characteristics of hazardous substances at the site; and (3) the type, quantity, and exposure levels of targets.

   Scores are assigned to individual factors that make up these evaluations, and an overall site score, ranging from O to 100, is calculated. The HRS site score is the primary *means* of determining whether NPL placement is warranted.

6. **Further Action Necessary?** On the basis of the site score and supporting information, EPA determines whether further investigation is necessary. Generally, sites that score below 28.5 are designated as SEA. As with PA SEA sites, States, other regulatory authorities, or Federal agencies may undertake further action at their own SI SEA sites. Focused SI sites that score 28.5 or higher are recommended for an expanded SI. A removal assessment may be recommended for any site, regardless of score.



Ix. Determination of the Need for Further Investigation

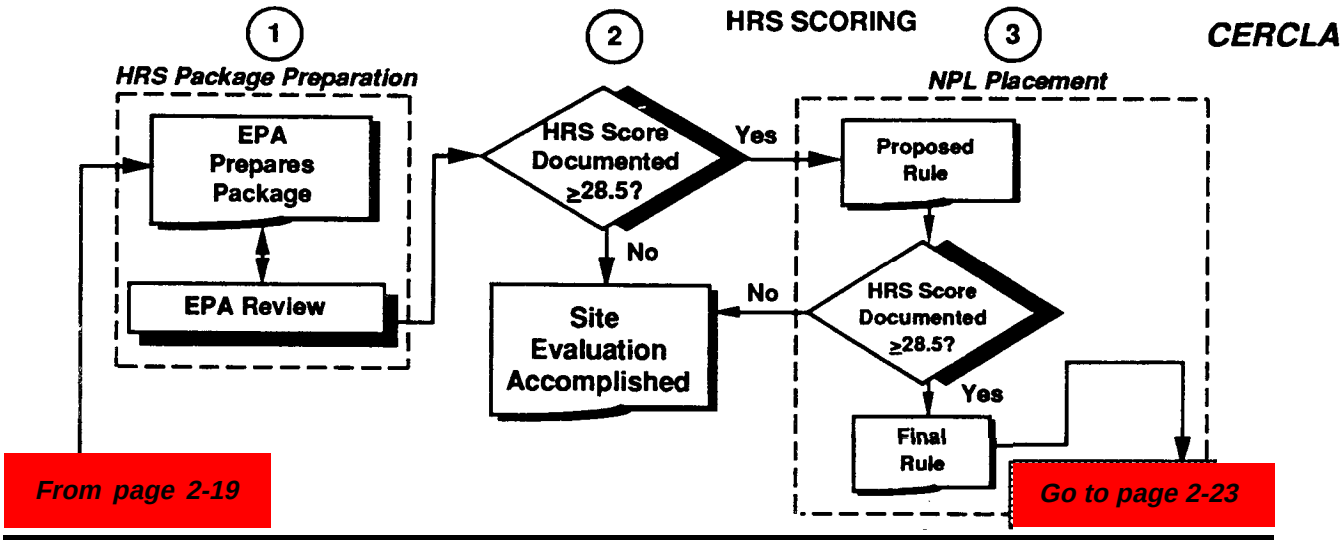
1. **Contamination Present?** EPA reviews the report to assess if there is environmental contamination at the facility.

2. **No Further Action.** If the RFA does not identify any actual releases of hazardous waste or hazardous waste constituents from SWMUs or does not identify any SWMUs with a potential for releasing hazardous waste or hazardous waste constituents to the environment, the facility may request termination of RCRA Corrective Action. The facility does this by requesting a "Determination of No Further Action" (DNFA). The DNFA is developed by EPA and is issued either through a modification of the facility's permit or through revocation of the RCRA §3008(h) Order requiring the RFA. However, a DNFA usually includes provisions for requiring RCRA Corrective Action if subsequent information identifies a release or potential release of hazardous waste or hazardous waste constituents at the facility.

Ralease of Hazardous Waste from SWMU? EPA assesses if the environmental contamination is due to a release of a hazardous waste or hazardous waste constituent from an SWMU.

4, **Action Under Other Authority.** If no releases or potential releases of hazardous waste or hazardous waste constituents subject to RCRA Corrective Action are identified, but the RFA does identify an area of contamination posing a threat to human health or the environment that is not subject to RCRA Corrective Action or that is permitted under another program (i e., a release regulated through an NPDES permit), EPA will refer these releases to the appropriate EPA program office. DOE policy is to consider the use of other legal authorities to address such releases.

5. **RFI Required.** If analysis of the data collected during the RFA identifies actual releases of hazardous waste or hazardous waste constituents from SWMUs or identifies SWMUs with a potential for releasing hazardous waste or hazardous waste constituents to the environment, EPA will usually require an additional investigation at the facility, usually an RFI (discussed in the next chapter).



X. HRS Scoring Documentation and NPL Placement

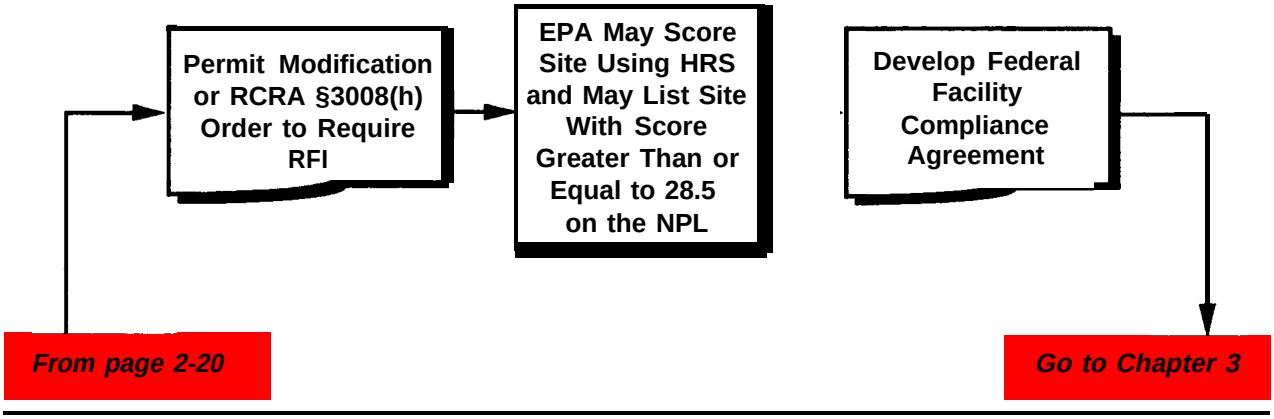
1. **HRS Package Preparation.** HRS packages may be prepared for sites that score 28.5 or higher. EPA prepares the HRS package. The HRS package includes a narrative summary describing the site; a set of scoresheets summarizing HRS factor values, factor category scores, am-I site scores; detailed documentation supporting each assigned factor value; and reference materials providing the raw data from which factor values were derived.

   For Federal facilities that involve several non-contiguous sources, EPA also requires an "aggregation rationale." The aggregation rationale explains the reasons for grouping non-contiguous areas as a single site for HRS scoring and response purposes.

   Each EPA Region subjects HRS packages to QC to ensure completeness of the submittal, proper format, and conformance with HRS scoring and NPL eligibility policies. EPA Headquarters then conducts a rigorous QA review in which the documentation is scrutinized and independently evaluated to ensure accuracy, defensibility of interpretations and conclusions, and conformance with the technical requirements of the HRS.

2. **HRS Score.** If the QC/QA process does not result in a documented, defensible site score of 28.5 or higher, the site is referred back to the responsible Federal agency for revision, or to the EPA Region for further consideration, or designation as SEA.

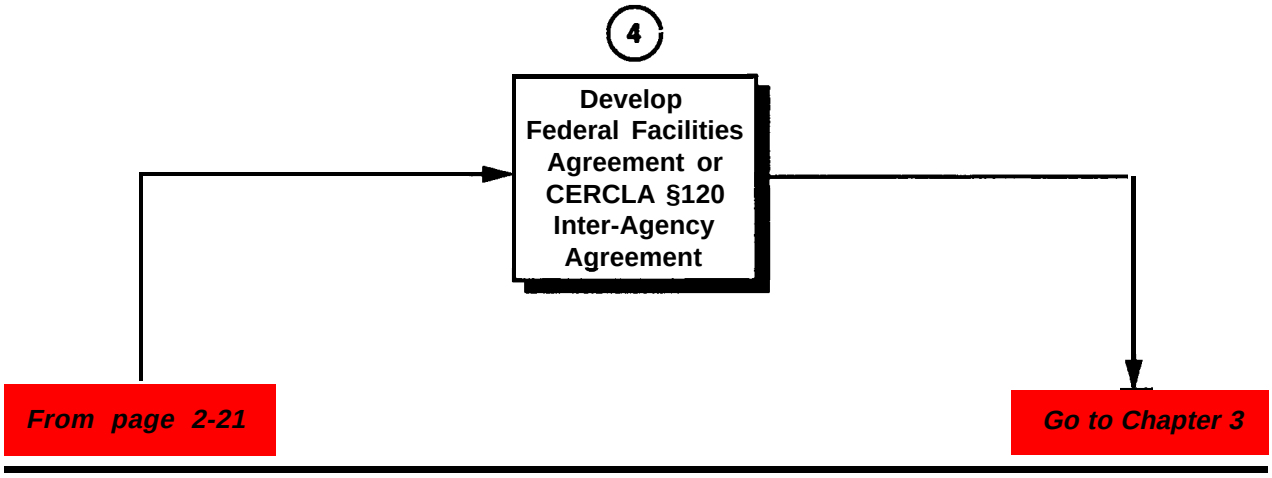
3. **NPL Placement.** EPA is required to update the NPL at least once a year. EPA follows a formal ruiemaklng process in which sites are first proposed to the NPL and a 60-day public comment period is offered (40 CFR §300.425). If technical information submitted by commenters warrants, site scores are adjusted. Sites where the score drops below 28.5 are referred back to the Region for further consideration or SEA designation; those retaining scores at or above 28.5 are placed on the NPL in a final rule published in the *Federal Register.* Currently, 1,200 sites are on the NPL, over 100 of which are Federal facilities. For Federal facility sites listed on the NPL, the responsible Federal agency must conduct an RI/FS for that site (discussed in the next chapter).



6. **Requirement for RFI.** If additional RCRA Corrective Action is required at a permitted facility, EPA will issue a permit modification requiring the facility to conduct an RFI. For interim status facilities, EPA will issue a RCRA §3008(h) Order requiring the facility to conduct an RFI. Usually, these permit modifications or Orders include a schedule of compliance specifying the length of time the facility has to develop the plans and necessary documents for an RFI and for actually conducting the RFI.

7. **NPL Placement.** Currently, the RCRA Corrective Action program does not use the HRS or any other formalized method to evaluate the relative risks posed by each facility, but the proposed Subpart S rule makes reference to a method as being under development. However, for Federal facilities, EPA may evaluate a release of hazardous waste or hazardous waste constituents subject to RCRA Corrective Action using the HRS (Appendix A to the NCP). Pursuant to current EPA policy (see 54 FR 16520, March 13, 1989), Federal facilities where releases of hazardous waste or hazardous waste constituents are addressed through the RCRA Corrective Action program are eligible for inclusion on the NPL. EPA intends to list such facilities on the NPL if the nature and extent of the release, the affected environmental media, and the potential exposure of humans, food chains, or sensitive environments lead to an HRS score greater than 28.5.

8. **Federal Facility Compliance Agreement.** If additional investigations are required at the facility, DOE and EPA will enter into an FFCA or a CERCLA §120 IAG to establish the specific requirements for conducting an RFI. The FFCA or IAG will set out timetables for conducting the investigation, establish reporting requirements, provide for integration of the RFI with responses under other authorities (important for RCRA facilities that are listed on the NPL), and provide for oversight and funding agreements.



4. Develop Agreement. Before conducting the RI/FS, DOE and EPA will enter into a CERCLA §120 IAG or an FFA. These agreements establish the specific requirements for conducting the RI/FS. DOE policy requires an FFA to be initiated within 6 months after NPL listing. The FFA will set out timetables for conducting the RI/FS, establish reporting requirements, integrate the RI/FS with actions taken under other authorities, and provide for oversight and funding agreements.

Summary

Topic	RCRA
Applicability	New or interim status facility applies for RCRA permit or permitted facility discovers a release of a hazardous waste or hazardous waste constituent or discovers SWMU which was not examined during initial RFA at the facility (see p. 2-2)
Reporting Requirements	• Submission of a "RCRA §3016 report" • Reporting under CERCLA §103(a) required if release is in excess of a reportable quantity
Response to Immediate Threats	• Known as "interim measures" • Actions to address actual or potential releases of hazardous waste or hazardous waste constituents from an SWMU
Steps in Conducting the Assessment	RCRA Facility Assessment consists of: • A preliminary review of available data • A visual site inspection • An optional sampling visit to collect a limited number of environmental samples • Determination of need for further action • RFA report preparation • Permit modification
HRS Scoring	EPA will perform an HRS scoring for Federal facilities if the facility is likely to score >28.5 (see 54 FR 41000, October 4, 1989)
NPL Listing	EPA will list on the NPL only Federal facilities with an HRS score >28.5 (see 54 FR 41000, October 4, 1989)
Next Step in Process	RCRA Facility Investigation/Corrective Measures Study

Summary

Topic	CERCLA
Applicability	Discovery of a site where there is an uncontrolled release of a hazardous substance, pollutant, or contaminant
Reporting Requirements	• Reporting of releases of hazardous substances to National Response Center (CERCLA § 103[a]) • Reporting of hazardous waste activities (CERCLA §103[cl) • Federal facility reporting under CERCLA §120(b) and (c)
Response to Immediate Threats	• Known as "removal actions" • Taken to eliminate threat posed by an actual or potential release of a hazardous substance, pollutant, or contaminant • Requires removal PA and, if necessary, a removal SI
Steps in Conducting the Assessment	Preliminary Assessment consists of: • File searches • "Desktop" data development • Site reconnaissance • PA report preparation and PA scoring Site Inspection consists of: • Review of PA findings • Additional data collection • Limited sampling of environmental media • SI report preparation • HRS scoring • HRS package development and NPL listing decision
HRS Scoring	All sites scored using HRS to determine NPL eligibility
NPL Listing	All sites with HRS score >28.5 are listed on NPL
Next Step in Process	Remedial Investigation/Feasibility Study

References

Hazard Ranking System: Appendix A of the National Oil and Hazardous Substances Pollution Contingency Plan. 40 CFR §300 Appendix A.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (as amended by the Superfund Amendments and Reauthorization Act [SARA)). 42 USCA §9601 et seq.

The National Oil and Hazardous Substances Pollution Contingency Plan. (40 CFR Part 300)

The Resource Conservation and Recovery Act (RCRA) (as amended by the Hazardous and Solid Waste Amendments [HSWA). 42 U.S.C. §6901 et seq.

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USEPA. *Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities (Proposed Rule).* 55 FR 30798, July 27, 1990.

USEPA. *Corrective Action Management Units and Temporary Units; Corrective Action Provisions (Final Rule).* 58 FR 8658, February 16, 1993.

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